Thang Cao

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Education

Carleton University ***Ottawa, Ontario, Canada***
Bachelor of Computer Science, Co-operative Education Sep 2019 – Dec 2023
CGPA: 11.30/12 (**A+**). On **Dean's Honour List** since 2019.

Experience

Amazon - ***Software Engineer Intern*** ***May 2023 – Aug 2023***
- Designed the architecture of an Amazon product detail page preview for complex apparel size attribute on Amazon Seller Central's 1-on-1 item creation experience
- Implemented the preview feature using React-Redux with TypeScript for front-end and Java for back-end
- Minimized incorrect input issues during product listing and reduced Amazon Retail's total listing feature friction by 3% within 2.5 million third-party sellers

Pattern - ***Software Engineer Intern*** ***May 2022 – Aug 2022***
- Developed scalable API services using Express.js + TypeScript + Docker integrated with AWS for data syncing which automates workforce recruitment and management processes (previously manual) by 90%
- Applying new design to the Flutter mobile app by creating an internal UI library with reusable widgets
- Set up automated database migration system on CI/CD pipeline with Docker and Terraform

Kinaxis - ***Software Engineer Intern Kinaxis*** ***Sep 2021 – Dec 2021***
- Designed and built an interactive data visualization with D3.js library on React + TypeScript environment which enhanced the ability to analyze supply chain allotment data and debug issues, assisted onboard Kinaxis's new developers by providing supply arrangement algorithm's insights

Kinaxis - ***Software Engineer Intern*** ***May 2021 – Aug 2021***
- Investigated and implemented in C++ a product cycle detection graph algorithm that combines variances of strongly connected components and cycles enumeration algorithms to enhanced supply planning outputs for over 200 global enterprises
- Improved the running time of the platform in cycles detection from more than 12 hours to 1 second on a customer data set, produced high-quality and more detailed cycle data compared to the previous version

CU Blueprint - ***Volunteer Front-end Developer*** ***Sep 2020 – Aug 2021***
Beneficent CRM
- Developed in a volunteer team a CRM full-stack web application using MERN stack
- Improved the manual processing time of a non-profit organization's loaning services by 10 times
- Collaborated with developers and designers in an Agile team, building a user-friendly and responsive user interface with reusable components using React + TypesScript and CSS that communicates with Node.js server

Carleton University - ***Undergraduate Research*** ***May 2020 – Aug 2020***
Closest-pair Doubling
- Explored a divide-and-conquer algorithm that calculates the closest-pair distance of points on multi-dimensional spaces without knowing coordinates using the doubling dimension definition
- Implemented from scratch with C++, analyzed and proved the algorithm's logarithmic running time in practice by analyzing the output data and successfully led the original research project to a conclusion

Carleton University - ***Teaching Assistant*** ***Sep 2020 – Present***
- Participated in engaging tutorial sections to help professors guide more than 2000 students through materials of Computer Science courses, graded and provided detailed feedback for students' assignments and tests
- Holding weekly office hours to answer questions and help students improve their understanding of the materials

Skills

Languages: Python, JavaScript, TypeScript, C/C++, Java, HTML, SQL, Kotlin
Technologies: React, Node.js, React Native, Express.js, Flask, CSS, Git, Linux, Spring, Flutter, AWS